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An Inaugural Dissertation on Catarrhus Epidemicus or Influenza

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Prefatory Note

In Selecting the subject of Influenza for my Inaugural Dissertation, my object was to show the striking analogy of some of its most prominent symptoms to Peripneumonia Notha, as it appeared in Pittsburg; though I have observed its symptoms are nearly alike, in every place of its prevalence.

In deciding on a Disease as a subject for a Dissertation, much difficulty presented; as the great variety of diseases which are interesting to Physicians, have already attracted the attention, and exhausted the ingenuity of other Candidates for Medical degrees; and as all diseases have been treated of by Medical Writers of the greatest celebrity, on whose discriptions and modes of practice, I could not have flattered myself with the hope of making any improvement. In the progress of this Essay,

I have therefore been obliged, to take a review of the opinions of some of the latest writers, who have written on this subject; and confidently hope, that due allowance will be given for the imperfect production of one arduous in the pursuit of medical science, and the benefit of mankind.

Influenza

According to Dr Cullen this disease is ranked in the class Pyrexia.—order of Profluvia.—Genus of Catarrhs,—and Species, a contagione.

Definition

It appears that this disease, is exclusively of atmospherical origin. Its remote cause is probably a deleterious gas, with the nature of which, we are wholly unacquainted. This gas, whatever be its origin, or composition, is capable of deffusing

itself through a greater extant of atmosphere, and with greater celerity then any other, ~~which~~ as was exemplified by its rapid diffusion through Philadelphia, Pittsburg, and other places in 1826.

It consists in a preternatural, and encreased secretion of mucus, from the Schneiderian membrane, Fauces, and Bronchiæ, accompanied with cough, Dyspnea, Pyrexia, &c.

History of the Disease.

Influenza was known to some of our earliest Medical writers, though under different names. From the time of Hippocrates to Sydenham it was called Febris Catarrhalis Epidemica; In 1673 Sydenham supposed it to be a new Fever, and named it accordingly.

When Astrology took the lead of true Science and the people began to fancy all terrestrial things were governed by the Heavens, some Italian doctors, supposed that this disease

proceeded from the influence of the Stars, and therefore denominated it Influenza. This disease prevailes at certain periods very extensively, not only in this country, but over the whole World, in a short space of time. Its course in its progress is generally from north to South; though occationally, in the contrary direction. Contagion has been thought by eminent men, to be its mode of propagation; but this opinion says Doctor Chapman. is intirely unproved, and to my mind it is no easy matter, to believe, that a disease can spread so far and wide in so short a time, as it does; or how it can affect so many persons many miles distant at the same time, where it has no direct, or indirect, communication if propagated by a matter arising from the body of a patient, labouring under it."

* "during its prevalence persons completely

* Dr Chapman

"sequestered, as monks &c, have all at once become
"affected, without any sensible cause". **And** as
Hippocrates says, "When many are seized
"with the same disease at one time, the cause
"is chiefly to be attributed to what is most
"common, and made use of by all. This is
"certainly what we inhale in inspiration".
This disease is governed by all the laws of
Epidemics. It is generally of an inflammatory
character, but sometimes, though rarely, it puts on
a Typhus Type; at other times it assumes
a Bilious character, and the treatment must
of course, be modified accordingly.

Symptoms

The Influenza made its appearance in the City
of Pittsburg in April 1825, previous to which,
the weather was dry and warm, succeeded by
cold, and frost. It generally sets in, with

universal lassitude, with chills, and heats; thirst; an acute pain; with giddiness in the head; Flushings in the face; great oppression at the chest; sore throat; hoarseness; violent pains affecting the limbs, loins and thighs; which very much resembled the rheumatism, and sometimes were remarkably severe.
The breast was often affected with acute darting, or flying pains; these sometimes became fixed, and were accompanied with a painful, and laborious respiration.
A cough universally attended this disease.
Violent sneezing, followed by a discharge of acrid matter from the nose, in some cases, ushered in, the disease.
The stomach was sometimes affected with nausea, and vomiting; the pulse was various, though generally tense and quick; the fever remitted generally on the fifth day, the cough sometimes

continued for several weeks, after all the other symptoms had subsided. The tongue was usually white and the Patients generally complaind, of want of apetite. The disease in some cases terminated by a spontaneous sweat.

Diagnosis

This disease may be confounded with common Catarrh, and with Peripneumonia Notha; and may be discriminated from the former by its commencing with more cold shivering, by the febrile symptoms appearing earlier; and being more considerable in degree, it gives a greater and more sudden shock to the strength; it likewise affects more persons at once, and spreads over a greater extent of country, in a given time. Catarrh can generally be shown to proceed from some sensible quality in the Atmosphere, Cold, - Moisture &c, while on the other hand Influenza is not produced by these, but must

be ascribed to some peculiar property of the air itself. The analogy of the symptoms of Peripneumonia Notha, and Influenza, in some particular cases which occurred in Pittsburg, persuade me to believe that they were one, and varieties of the same disease; and the difference was, in the violence of the symptoms. and as Doctor Cullen "says, (See Caldwells Cullen Vol 1st Page 288) this disease "(viz Peripneumonia Notha) appears at the same "seasons, that other Pneumonic and Catarrhal "affections commonly do; that is in the autumn "and spring. Like these diseases also. it is seemingly "occasioned by sudden changes of the weather "from heat to cold. It appears also, during the "prevalence of Contagious Catarrhs, and it is "frequently under the form of Peripneumonia "Notha, that these Catarrhs prove fatal to "elderly persons." Likewise in Post Mortum examinations, the air vessels of the Lungs, are

found obstructed with a thick viscid mucus, which is certainly the secretion from the bronchia; which secretion, characterises Influenza.
numbers of cases could be related where all the symptoms of Peripneumonia notha, and Influenza, were so blended together, that I found it impossible to discriminate between them; or to tell which was the existing disease. The only discriminating symptoms of this disease, are, that it most commonly attacks persons somewhat advanced in life; especialy those of a full phlegmatic habit; but those are the persons that I have remarked to be most frequently, and violently affected, with Catarrhus epidemicus.
Doctor Cullen also further remarks (Page 289 Vol 1st Caldwells Cullen) "From the different circumstances "in which this disease Peripneumonia notha appears, "the Pathology of it is difficult. It is certainly "often no other at first then a catarrhal

" affection, which, in elderly persons, is frequently
" attended with a large afflux of mucus to the
" Lungs; and it was on this footing, that
" Sydenham considered it as only differing in
" degree from his Febris Hyemalis." A Catarrh,
however, is strictly an affection of the mucous
membrane, and follicles of the Bronchia
alone: but it may readily raw, and frequently
has, a degree of Pneumonic inflammation
joined to it; and in that case, may prove
more properly, the peculiar disease we treat of
here; but further, as Pneumonic inflammation
very often produces an effusion of serum into the
Bronchia, so this in elderly persons, may occur
in consequence of a slight degree of inflammation,
and when it does happen, will give great pain,
and fatal cases of the Peripneumonia Notha will
often ensue. I shall, however, enter no further
into this controversy; as truth is the object

of which I am in search, and not the pursuit of fame, or new discoveries; but, shall endeavour to describe the disease as it has appeared to myself, and, as I judge, to all other observers.

Causes

These are devided into four kinds.- The Remote. The Predisposing. The Occasional or Exciting. And the Proximate. 1st The Remote cause, is whatever predisposes to the disease, namely, Long-Fasting. Evacuations. Fatigue &c. the consequence of which is, Debility; or the Predisposition to disease, which constitutes the 2nd cause or Predisposing.
3rd The Exciting, or occasional Cause, must be that external circumstance, which kindles the fever, to wit, Morbid Miasma. 4th Proximate Cause, or Febre Morbus, of Gabius and Rush, appears to be a degree of Inflammation affecting the Mucous Membrane of the Nose, Fauces, and Bronchia; which invite an increased afflux of fluids

to these parts; hence, the consequence is, an increased secretion. An increased Inflammation of the internal surface of these parts, not only suppresses secretion there, but is followed by sense of fullness in one or both nostrils; Dyspnea Sicca, a Quickend pulse, and fever. The febrile action of the arterial System is a natural consequence of Inflammation in these parts; for as Dr Fordyse observes in his excellent work on fevers, page 14 "any such impediment to the free circulation of the blood, as distroys its equilibrium, is the essential character of a fever"—

Of the Cure.

The treatment of this disease, like all others of an inflammatory nature, consists of the Antiphlogistic remedies; though so moderate is the Influenza, in many instances, as to require but a few days refraining from

the use of animal food; to lie in bed, or keep within doors, taking at the same time, some warm diluent drink, and to return gradually, to the usual manner of living: whilst in others, again, great attention is absolutely necessary; and the Cure difficult. (5) Emetics are valuable remedies, and much more so, when administered upon the first attack of the disease; not only, where there is reason to suspect an accumulation of mucus, in the Bronchial ramifications, but also where they are given chiefly with a view, to assist in producing, a speedy and copious perspiration; which in some patients, wholly carries off the Miasm; † before it becomes fixed, and propagated, in the body; and as Dr. Cullen remarks, * "For restoring the determination of the Fluids to the surface of the body, and at the same time for expediting

* Fairbrother's Cullen Page 68 Vol 2nd

" the secretion of mucus in the Lungs, which may
" take off the Inflammation of its membrane,
" vomiting is the most effectual ~~means~~ means."
Whenever stitches, or acute pains about the Chest
take place, then these medicines would be
improper, as tending to give exquisite, and
unnecessary Pain; and would endanger the
rupture of a blood vessel in the Lungs.
When Pneumonic symptoms, such as acute Pain
in the chest, and a full or hard pulse take
place, by Blood Letting is a proper and
speedy remedy to take down the Phlogistic
diatheses. Yet, from the great disposition
which this disease has to degenerate into
Typhus, we should be cautious in the use of the
Lancet. In general, the Patients recover sooner
when it is omitted, except where the above
symptoms are present. When the inflammatory
affections of the Lungs seem to be considerable,

it is proper besides blood letting, to apply Blisters on some part of the Thorax; and in some cases I found it necessary to repeat the Blistering two, or even three times.
Cathartics are necessary medicines, particularly, when there is a determination to the abdominal Viscera; and if the patient be affected with much Cough, Violent head-ach, constipation &c.
Laxatives in some cases, seem preferable to Purgatives; as the latter debilitate the System considerably, by a single operation, if given in a full dose; and the former keeps the body regular, or gently Lax, which is so desireable in preventing Costiveness in this, as well as in all other Febrile or inflammatory diseases. For determining to the surface, keeping the bowels moderately open, and promoting expectoration, nauseating doses of

Tartarized Antimony, combined with nitre, is a useful remedy; taking care at the same time, not to give them in too large doses, as they often act prejudicial, by bringing on evacuations, which may entirely sink the patient; as also when continued for a long time, they are apt at length to debilitate the stomach, so much as to render it in a great measure, incapable of retaining food, medicines, &c. These medicines likewise, soon lose their sudorific power over the system. After the inflammatory symptoms have much abated, if there exists an irritating, troublesome cough, a combination of Ipecacuanha, and opium, or the Balsam of of Tolu, with Laudanum, are very good; and afford the most effectual means of relieving it. The particular observence of the Antiphlogistic Regimen, can not be too strongly inculcated in the inflammatory stage of this disease,

particularly avoiding Animal Food, which according to Dr Sydenham, is sacred and must not be touched. our really venerable Doctor Chapman, limits the Diet of his Patients, to Vegetables; as Rice, Turnips, Potatoes, Homeny, the vegetable Soups &c. Low Diet has its limits, nor should it be much longer persisted in, then whilst the inflammatory diathesis is present in the System; for a generous Diet in some instances, is highly conducive to a more speedy recovery.

The drinking frequently of Tepid Emollient Drinks, acts as an internal relaxing Fotus, which is of great consequence, in inflammation of the Lungs &c. It appears that the Italians use Sea-water in inflammation of the Lungs, and with great advantage; though I should suppose, it might prevent, or check, a Salutary Perspiration. Bathing the feet in warm water

is an excellent remedy; and should never be omitted in the incipient stage of this, or of any, other, Catarrhal affection; the temperature should be somewhat higher than that of the Patients own body; taking at the same time, some warm Diluents Drinks, together with a few drops of Antimonial Wine.

The Pediluvium encourages a large share of blood, from the head; and superior parts, to the lower; it determines to the surface; is generally followed by Sleep, and moderates the Cough &c. The frequent Inhalation of warm aqueous vapours, constitute a remedy of great importance; Water, Vinegar and water, Ether and water. Tar water, Rosin and water, are some of the best. The method of applying the vapour, is of little importance; the Steam received through an inverted funnel, answers as well, as, and perhaps better, than some of the Inhalers.

Towards the decline of the Disease, where the expectoration is both viscid, and difficult, Squills may be employed with benefit. When the Cough proves troublesome, and the Febrile Symptoms have subsided, an anodyne at night may have a good effect. Langour and debility, which invariably attend the convalescent state of this Epidemic, requires the use of Tonics such as the Decoction of Bark, with the mineral acids, &c; or the Cold Infusion of Peruvian Bark, which is the best Tonic preparation of Bark I ever prescribed; are based as follows, Mix one ounce of Bark in powder, in a quart of water, add two drachms Salt of Tartar, (Carbonas Potassæ Purissimus) The dose a large tea Spoonful, to be taken every two hours for an adult: taking care to shake the mixture every time before taken. It very seldom

occasions purging. Costiveness or fever; but seems to correct acid (if present) in the Stomach, and Intestines; and may be given frequently in the Febrile state, in which state it seems to have the peculiar effect of a Febrifuge.

Cases

Case First. I was requested to visit a patient on the second of April, a man about the age of 27 years. The Symptoms were, First, Lassitude with Chills, and fever, bad taste in the mouth, together with want of appetite; His breast was affected with acute flying Pains, with a severe Cough, and sore throat: Pains in his back and thighs, which were remarkably severe; his Pulse tense and quick. The treatment was Bleeding, Purging, and Vomiting, together with Fomentations, and Blisters to the chest, which soon subdued the

Phlogistic diathesis. The Disease now manifested a tendency to degenerate into Typhus; which indicated Tonics; and which were administered. The Patient finally recovered and without the continuance of the Cough.

Case 2nd I was desired to visit a man aged 40 Years, on the 6th of April who was first attacked with Lassitude, with Chills, and fever, Severe Pains in the head, back, and loins, Sore throat hoarseness, a discharge of matter from the nose, Laborious respiration Cough; Costiveness, a full and quick Pulse which yielded to depleting remedies. Together with Pectorals &c.

I have remarked the two above cases, merely to show, that they had both the symptoms of a Pneumonia Notha and Influenza, and yielded to the same treatment. and if by

this weak but honest attempt of a medical Bro. I have caused the subject to be noticed, I shall feel satisfyde.

Prophylactics

The best preventatives are the avoidance of the causes; as too long fasting, night watching, fatigue, &c also temperance in eating, and drinking: with respect to temperance in eating I wish not to inculcate the avoidance of a proper quantity of food; as changes in the manner of living, during the rages of an epidemic, are always dangerous

Prognosis

Respecting the prognosis of this Disease, little can be said, as the ~~tera~~ termination, or consequences, are like every other part of it, extremely various.

I have now considered the most interesting particulars of this Disease; but before I

close this imperfect Essay, it remains for me to proffer my thanks, to the Medical Professors of this University, for the permanent advantages which I have derived from their instructing Lectures. May they long continue to exercise the duties attached to their respective departments, with the same reputation that has heretofore crowned their labours, is the sincere wish of their obliged and grateful Pupil

John W. Burrell

4th oct. 1825–

Spelling not always correct, nor is the language